

## Chapter 12 DNA and RNA

## Section Review 12-4

### Reviewing Key Concepts

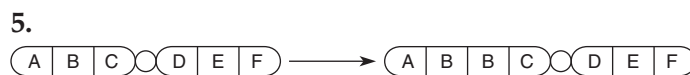
**Completion** *On the lines provided, complete the following sentences.*

- Genetic information is altered when changes in the DNA sequence, called \_\_\_\_\_, occur.
- Changes in the DNA sequence of a single gene are called \_\_\_\_\_.
- The DNA sequence of an entire chromosome is affected by a(an) \_\_\_\_\_.

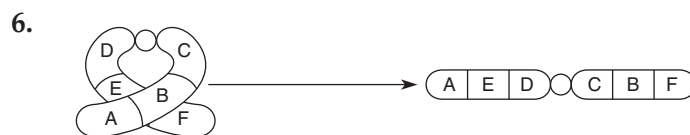
**Identifying Structures** *On the lines provided, identify each diagram as one of the following mutations: translocation, inversion, duplication, deletion. Then, describe what happens during each mutation.*



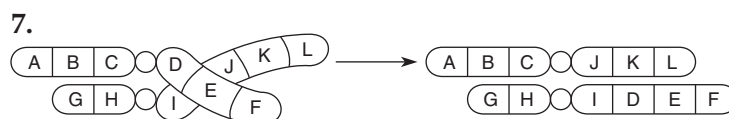
4. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



5. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



6. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



7. \_\_\_\_\_  
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 \_\_\_\_\_

### Reviewing Key Skills

8. **Comparing and Contrasting** How are frameshift and substitution mutations similar? How are they different?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

9. **Applying Concepts** How can polyploidy in plants benefit humans?

\_\_\_\_\_  
 \_\_\_\_\_

10. **Applying Concepts** Compare the original sequence GCA CCG AGA to the mutant sequence GCA CAC GAG and determine what type of mutation has occurred.

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